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reported among the elderly (74.21%), significant variations across age groups, regions, and insurance types observed in this well-insured group call for future research to better understand reasons behind these variations.

PCN127

RELATIONSHIPS BETWEEN RESOURCES AND SCREENING RATES FOR BREAST AND CERVICAL CANCERS IN JAPAN

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OBJECTIVES: In Japan, the screening rates for breast and cervical cancers have been lower than in other countries, with rates below 20%. Breast cancer screening has been conducted biennially for over 40 years, and cervical cancer screening has been conducted biennially for over 20 years. Since lack of resources is an important barrier to increasing cancer screening rates, relationships between resources and cancer screening rates were investigated for breast and cervical cancers in Japan. **METHODS:** Based on the national data from 2008, the resource gap among 47 prefectures was compared. Resources were defined by the number of mammography equipment installations (per 100,000 women) for breast cancer screening and the number of gynecologists (per 100,000 women) for cervical cancer screening. Correlations between the screening rates and the availability of resources were calculated. **RESULTS:** The national average breast cancer screening rate was 14.7%, varying from 2.5% to 35% among the 47 prefectures. The national average number of mammography equipment installations was 5.88 per 100,000, ranging from 8.81 to 4.41 per 100,000 among the 47 prefectures. The correlation between mammography equipment installations and the screening rate for breast cancer was 0.420 ($P<0.01$). The national average cervical cancer screening rate was 19.4%, varying from 12.1% to 34.8% among the 47 prefectures. The national average number of gynecologists was 18.0 per 100,000, ranging from 13.1 to 25.9 per 100,000 among the 47 prefectures. The correlation between the number of gynecologists and the cervical cancer screening rate was -0.079 (n.s). **CONCLUSIONS:** Although the breast cancer screening rate shows a close relationship with medical resource availability, there is no relationship for cervical cancer screening. Since medical resources to increase breast cancer screening are limited in local areas, sufficient resources should be provided. In cervical cancer screening, other factors that affect the screening rate should be investigated.

PCN128

PREDICTORS OF NON-PARTICIPATION IN A SURVEILLANCE STUDY OF APPALACHIAN WOMEN PARTICIPATING IN A STATE-WIDE MOBILE MAMMOGRAPHY PROGRAM

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OBJECTIVES: Non-participation by potential study subjects in population research can affect the validity and generalizability of study outcomes. The study objectives were to evaluate the differences between participants and non-participants who were targeted for enrollment in the Bonnie's Bus Mobile Mammography Program (BBMMP) conducted throughout West Virginia, and to determine the predictors of willingness to participate in future research among those who consented to provide initial surveillance data. **METHODS:** Data collected from 2441 women who were screened in the BBMMP were analyzed using the chi-square test and logistic regression. **RESULTS:** Of the 2441 women who were screened by BBMMP over a 3 year period, 1178 women (48.3%) chose not to consent to participate in the surveillance study. Bivariate analysis indicated that being over 65 years, single, overweight, uninsured, unemployed, or of minority race were associated with non-enrollment in the study. The multivariate adjusted model indicated that being of age 65 years and above (AOR=2.10), being single (AOR=1.25), or being from a minority race (AOR=1.97) were significant predictors of non-participation. Of the 1,263 women who consented to participate in the study and provided surveillance data, 407 women (32.2%) declined to being contacted for participation in future breast cancer screening research. The unadjusted model showed that women who have breast problems, are adherent to mammography screening guidelines, and are married/partnered are more likely to be willing to participate in future research. Multivariate logistic regression analysis revealed that women adherent to mammography screening guidelines are more likely to agree (AOR=1.40) to participate in future research than non adherent women. **CONCLUSIONS:** Women who are at risk for breast cancer and who are likely targets for interventions to increase adherence to mammography screening guidelines are more likely to not participate in breast cancer screening studies than those who may not be at risk and are adherent to screening guidelines.

PCN129

ASSOCIATION BETWEEN BMI AND PERSONAL HEALTH AND SCREENING HISTORY, PREVENTIVE CARE, AND WELLNESS BEHAVIORS AMONG PARTICIPANTS IN A MOBILE MAMMOGRAPHY PROGRAM

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OBJECTIVES: Few studies have focused on access to care for women through utilization of a mobile mammography unit. Bonnie's Bus Mammography Mobile Program (BBMMP) was created to provide mammograms to women in rural areas throughout West Virginia (WV) and surrounding areas. Based on a 3-year analysis of the data, 80.4% of its clientele had a BMI of 30 or above as compared to 64.9% for all WV women age 40 and above. Thus, the objectives of the study were to: 1) to describe the demographics and comorbidities of women who utilized BBMP, and 2) to determine the association between BMI and personal health and screening history, preventive care, and wellness behaviors. **METHODS:** Three years BBMP surveillance data collected from 1099 women age 40 and above were analyzed. BMI by personal health and screening history, preventive care, wellness behaviors, and demographics were analyzed using descriptive statistics, chi-square tests, and a linear regression model. **RESULTS:** Women were mostly married (60.4%), had health insurance (53.2%), were employed (46.5%), and had an annual income between $10,000-25,000 (40.9%). Major comorbidities were hypertension (49%) and high cholesterol (43.9%). Increasing BMI was associated with greater likelihood of thyroid disease, hypertension, diabetes, high cholesterol, allergies, hormone replacement therapy use, activity limitations, perceived weight problem, lower exercise, inability to get medications due to cost, lower doctor visits, and being single. Those with lower BMI were less likely to smoke or drink alcohol. The regression model was significant ($F=13.729$, $p<0.001$, $R^2 = 0.412$) and indicated that women who engaged in preventive care behaviors were less likely to be obese than those who did not. **CONCLUSIONS:** The BBMMP attracted women who were disproportionately obese and had multiple co-morbidities, thus providing a great opportunity for targeted interventions related to improving preventive care, screening, and self-care behaviors.

PCN130

EVALUATING OUTCOMES OF SPECIALTY MEDICATION SERVICES THROUGH A NATIONAL HEALTH PLAN SPECIALTY PROGRAM: A CASE OF ORAL ONCOLOGY MEDICATIONS

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OBJECTIVES: Specialty pharmacy programs are increasingly used to improve the quality of outpatient therapy with oral medications for cancer. We evaluated whether use of particular specialty pharmacy services is associated with improved oncology medication use and reduced overall healthcare costs, as compared to retail pharmacy services. **METHODS:** The study is a retrospective claims analysis post implementation of a specialty pharmacy program, by a national commercial payer. A matched sample of patients assigned to use specialty pharmacies and those who used retail pharmacies for oral cancer therapies were compared. Primary outcomes were financial, including overall health care costs, outpatient costs, medical costs, and pharmacy costs. Outcomes one year post-implementation in specialty pharmacy users and retail pharmacy controls were compared with t-tests for continuous variables, chi-square for nominal variables, and logistic regression for matching. Propensity scores were used to adjust for unmeasured confounding in the groups. **RESULTS:** The final analysis included 464 patients per cohort. The mean total costs per patient was 13% lower in the specialty pharmacy group ($84,105 vs. $97,196; difference = $-13,092; $P = 0.02$) in the follow-up period. The mean outpatient hospital costs ($16,777 vs. $28,629, difference = $-11,852; $P < 0.01$) were lower in the specialty group by 41%, with an associated significant difference in outpatient hospital visits (15.75 vs. 19.66, $P < 0.01$). Patients in the specialty pharmacy group were more adherent to therapy, MPR 0.73 vs. 0.66, ($P < 0.01$). **CONCLUSIONS:** This specialty pharmacy program implemented by a national commercial payer appears to improve oral oncology medication adherence and decrease overall health care costs, mainly by impacting outpatient hospital utilization.

PCN131

PATIENTS' OUT-OF-POCKET (OOP) COSTS FOR GRANULOCYTE COLONY-STIMULATING FACTORS (G-CSF)

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OBJECTIVES: The rising costs of cancer care have caused concerns regarding the increasing OOP burden on cancer patients. The objective of this study is to examine patients' OOP expenditures on G-CSF, pegfilgrastim and filgrastim, two supportive-care agents for cancer patients treated with myelosuppressive chemotherapy. **METHODS:** Two large US health care claims databases (2008-Q2 2010 MarketScan® Commercial and Medicare Supplemental Databases, and 2007-Q2 2009 HealthCore Integrated Research Database℠) were used to identify adult patients receiving chemotherapy and G-CSF in outpatient settings. The summary statistics of quarterly OOP costs were tabulated for patients with any G-CSF claim for each quarter during Q1 2007-Q2 2010. Costs were adjusted to June 2010 dollars. **RESULTS:** The pattern of patients' OOP costs for G-CSF was generally consistent between the two data sources and over time. On average, about 65-75% of patients on G-CSF incurred zero OOP costs in a quarter. Across the years, the average quarterly OOP costs per patient for all patients ranged from $100-$150 for pegfilgrastim and $50-$100 for filgrastim. When focusing on the 20,948 patients on G-CSF with continuous health plan enrollment throughout 2009 in MarketScan®, mean OOP costs/patient/quarter were $100 for pegfilgrastim and $53 for filgrastim. On average 69.2% of pegfilgrastim patients and 63.9% of filgrastim patients had zero OOP costs in a quarter. Very few patients (5.5% of pegfilgrastim and 2.7% of filgrastim) had quarterly OOP costs reaching $500 or above. The subgroup of patients with >$0 quarterly OOP costs had mean costs/patient/quarter that were $324 for pegfilgrastim and $146 for filgrastim. During 2009, that subgroup had an average of 2.4 administrations and/or prescriptions per quarter for pegfilgrastim and 5.5 for filgrastim. The mean OOP costs of those administrations and/or prescriptions were $128 for

pegfilgrastim and $30 for filgrastim. **CONCLUSIONS:** During 2007-2010, the majority of patients did not pay OOP for G-CSF.

PCN132

A NHS PERSPECTIVE OF THE IMPACT OF THE CANCER DRUGS FUND ON ONCOLOGY DRUG USE AND OTHER HEALTH CARE RESOURCES WITHIN ENGLAND

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OBJECTIVES: In 2010 the UK government made an election pledge to improve access to cancer drugs. The Interim Cancer Drugs Fund (ICDF) was introduced in October 2010. This became the Cancer Drugs Fund (CDF) in April 2011. An additional £200 million per year, for three years was made available to fund cancer drugs within England. The CDF money was allocated to the 10 Strategic Health Authorities within England. The Cancer Network Pharmacists manage or are closely involved with the CDFs. The objective of this research was to identify the impact on oncology drug use and healthcare resources as a result of the introduction of the CDF. **METHODS:** A literature search was undertaken to identify any research relevant to the CDF, cancer drug and healthcare resource use. A semi structured questionnaire developed to capture quantitative and qualitative data relating to changes in oncology drug use and healthcare resources. The questionnaire was piloted with three Cancer Network Pharmacists. Telephone interviews were undertaken with Network Pharmacists covering the ten CDFs. The data collected was assessed and evaluated, using a thematic framework. The results of the research were then validated by three Cancer Network Pharmacists. **RESULTS:** The CDF had led to a significant increase in use of some drugs, hospital attendances, associated treatment costs and workload for Network Pharmacists. The commissioning process for cancer drugs had changed; new drugs were not commissioned unless recommended by NICE. **CONCLUSIONS:** The CDF had changed clinical practice for the management of certain cancers. The Increased use of cancer drugs had led to additional costs which were not covered by the CDF. If the CDF disappeared in 2014 it was unclear how some drugs would be funded which would have implications for clinical practice.

PCN133

DATA LINKAGE FOR HPV VACCINATION, SCREENING, AND CERVICAL CANCER OUTCOMES: IS THERE AN EVIDENCE BASE FOR PUBLIC HEALTH DECISION-MAKING ON CERVICAL CANCER PREVENTION STRATEGIES?

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OBJECTIVES: To assess the availability of linked data on HPV vaccination, screening, and cervical cancer outcomes to guide public health decision-making on cervical cancer prevention strategies. **METHODS:** MEDLINE and Google Scholar (1/1/2006-12/31/2011) were searched using keywords HPV registry, linkage, and cervical cancer to identify countries with national HPV vaccination. Australia, New Zealand, Denmark, Norway, Greenland, Sweden, Iceland, the United Kingdom, Canada, Mexico, and the United States were selected for detailed analysis based on previous review frameworks (Wong et al. 2010; Sander et al. 2012). Information on infrastructure, outcomes collected, surveillance registries and data linkage for these countries through January 15, 2012 was extracted from official health authority websites and government reports. Documents not publicly available or without data on these topics were excluded. **RESULTS:** Twenty peer-reviewed articles and health authority documents were selected for review. Of the 11 countries evaluated, 64% (7/11) have national HPV vaccination registries collecting vaccination data and comprehensive cancer registries that include cervical cancer outcomes. Four out of the eleven participate in the WHO HPV Laboratory Network that aims to develop an international reference system for HPV assays to monitor performance of HPV vaccines. Five of the 11 countries have linkage of vaccination, cancer screening, and cancer registry records at the national level; however, the other six countries have potential linkages at provincial/territorial levels. None of the 11 countries had data on HPV DNA genotyping linked with other cervical cancer screening and vaccination data. **CONCLUSIONS:** While fewer than half of the countries assessed had nationally linked data on HPV vaccination, screening, and cervical cancer outcomes, the remaining countries have potential local-level linkages of these data. Establishing data linkages across these sources of information can enable an evidence base to explore the impact of national vaccination strategies and to inform cervical cancer prevention efforts.

PCN134

EFFECTS OF CLINICAL PHARMACIST INTERVENTIONS ON CLINICAL OUTCOMES IN ONCOLOGY PATIENTS

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OBJECTIVES: To assess the effect of clinical pharmacist interventions on the clinical outcomes in oncology patients. **METHODS:** A total of 100 patients received their chemotherapy cycles with clinical pharmacy interventions were enrolled in the present study during January 2007 to January 2008. Clinical pharmacy interventions include: Detecting medication errors by using a modified form of the American Society of Hospital Pharmacists (ASHP) worksheet. Correcting those errors and sending recommendations to the medical staff. **RESULTS:** The clinical pharmacy interventions reduced the number of medication errors from 1548 to 444 which was statistically significant ($p=0.004$). A total of 1104 clinical pharmacy interventions were documented in this present study. Forty-five percent of clinical pharmacy interventions have led to increase in the efficacy of chemotherapy regimen and 54.7% have led to decrease in the chemotherapy toxicity. Seventy six percent of the errors recorded in the present study occurred in the prescribing stage, about 20 % in the administration stage and 3.8% in the dispensing stage. **CONCLUSIONS:** The clinical pharmacy interventions among oncology patients can reduce the number of medication errors; improve the clinical outcomes through increasing chemotherapy efficacy and reducing the toxicity.

PCN135

CREATING ONCOLOGY COVERAGE POLICY: THE RELIANCE ON COMPENDIA AND TREATMENT GUIDELINES BY 25 PRIVATE US PAYER

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OBJECTIVES: The objective of this study is to determine how 25 major private US payers use approved compendia and treatment guidelines when creating oncology coverage policy for product usage outside of Food and Drug Administration (FDA) approved indications. **METHODS:** Primary and secondary research was conducted on the oncology coverage policies of US payers, n=25, to determine if they follow the Centers for Medicare & Medicaid Services (CMS) recommended guidelines on use of compendia when making coverage policy decisions. Payer polices reviewed include: United, Anthem, PacifiCare, Empire BC/BS, CIGNA, BC/BS of AB, Oxford, BC/BS of TN, Kaiser, Humana, BC/BS of IL, CareSource, BC/BS of NC, CareFirst, Wellpoint, BC/BS of MN, Highmark, Aetna, Golden Rule, BC/BS of MI, Independence, BC/BS of FL, BC/BS of MA, BC/BS of WA, BC/BS of TX. **RESULTS:** Of the 25 US payers surveyed, 12 payers follow CMS published guidelines that now mandate that coverage can be given if an indication has a positive review in one of the approved compendia and as long as no one compendia has a negative listing of the indication. A total of 8 payers have authored unique coverage policies that often are broader than CMS' guidelines. Such policies often include coverage for indications listed in the National Comprehensive Cancer Center (NCCN) Drug & Biologics Compendia as class IIb or III. The remaining five payers continue to rely on CMS' previous policy prior to the expansion of the compendia list. **CONCLUSIONS:** The majority of the 25 US private payers surveyed have oncology coverage policies for non FDA indicated uses that either mirror CMS' compendia policy, or are somewhat more liberal in their interpretation based on their review of published data and reliance on lower levels of evidence.

PCN136

ONCOLOGY DRUG PRICES IN THE UNITED STATES AND THE UNITED KINGDOM: IMPLICATIONS FOR PRICING STRATEGY AND DRUG ACCESS

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OBJECTIVES: To understand relative price differential for cancer drugs in the United States and the United Kingdom. Develop implications for pricing strategy and patient access for cancer drugs. **METHODS:** Ten branded cancer drugs were selected and their prices for similar dose and packaging were compared in the United States and the United Kingdom. Prices were analyzed for the end of 2010 and early 2011. Historical exchange rates were used to convert British pounds to US dollars. Relative price discount was calculated for all selected cancer drugs. KOLs and payers were interviewed to understand current and future implications of this price differential. **RESULTS:** The median price discount for selected ten branded cancer drugs in the United Kingdom versus the Unitted States was ~50%. The range of discount for 10 branded cancer drugs was 27%-61%. The price discount for oral small molecule drugs was higher than for biologics (55% vs. 45%). Since United Kingdom is one of the few remaining free pricing markets in Europe, other European markets are likely to have even higher discounts relative to the prices in the United States. Due to rising coinsurance of speciality products, US cancer patients bear significantly higher cost than patients in the United Kingdom. KOL and payer interviews suggest US pricing trends for cancer drugs are unlikely to be sustained at this level in the future. **CONCLUSIONS:** US cancer drug prices are significantly higher than the prices in the United Kingdom. This price differential is unlikely to be sustained in the future.

PCN137

SURGERY, RADIATION, AND SYSTEMIC THERAPIES IN PATIENTS WITH METASTATIC MELANOMA

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OBJECTIVES: To describe treatment patterns with surgery, radiation, and systemic (drug) therapies in patients with metastatic melanoma in the United States. **METHODS:** Using a large US medical claims database, patients were identified between 2005 and 2010 using ≥2 melanoma diagnoses (ICD-9-CM: 172.xx, V10.82) and ≥2 diagnoses for metastasis (ICD-9-CM: 197.xx, 198.xx). The index date was the first date of metastasis diagnosis. Patients were followed from the index date to death, disenrollment, or end of the study period (6/30/2010), whichever occurred first. Surgery, radiation, and systemic therapies were examined descriptively. Factors influencing treatment were examined using a logistic regression separately for surgery, radiation, and systemic therapy. **RESULTS:** A total of 2546 patients with metastatic melanoma were included in the analyses. Mean (± standard deviation) age was 60.6 (± 14.0) years old with 22.8% under 50 and 36.5% were female. Overall, 66.8% of patients had cancer treatment related surgery, 38.7% received systemic therapies, 44.7% received radiation, and 17.7% of patients received all three treatments. Logistic regressions revealed that patients with lung ($p<0.0001$), brain ($p<0.0001$), liver ($p<0.0001$), or bone ($p<0.0001$) metastases were less likely to have surgeries; patients with lung ($p = 0.04$), brain ($p < 0.001$), or liver metastases ($p = 0.03$) were more likely to receive systemic therapies; as expected patients with brain ($p < 0.0001$) or bone metastases ($p < 0.0001$) were more likely to have radiation therapy. Patients being treated by oncologists were more likely to receive systemic therapy ($p < 0.0001$) or radiation ($p < 0.0001$) while patients being treated